

ARTICLE PROTECTED BY A THERMAL BARRIER COATING
HAVING A GROUP 2 OR 3/GROUP 5 STABILIZATION-
COMPOSITION-ENRICHED SURFACE

ABSTRACT OF THE DISCLOSURE

A protected article is prepared by providing the article, depositing a bond coat onto an exposed surface of the article, and producing a thermal barrier coating on an exposed surface of the bond coat. The step of producing the thermal barrier coating includes the steps of depositing a primary ceramic coating onto an exposed surface of the bond coat, and depositing a stabilization composition onto an exposed surface of the primary ceramic coating. The stabilization composition includes a first element selected from Group 2 or Group 3 of the periodic table, and a second element selected from Group 5 of the periodic table. The atomic ratio of the amount of the first element to the amount of the second element is at least 1:3, more preferably at least 1:1.